

# Aryan Jairath

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## EDUCATION

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### Rutgers University-New Brunswick

Piscataway, NJ

*Bachelor of Science in Computer Science and Data Science*

*Sept. 2021 – May 2025*

- Rutgers University School of Arts and Science Honors Program
- GPA: 3.95/4.00
- Relevant Coursework: Artificial Intelligence, Design and Analysis of Computer Algorithms, Data Structures and Algorithms, Computer Architecture, Software Methodology, Principles of Data Management (Databases), Discrete Structures I/II, Principles of Programming Languages, Data Management for Data Science
- Clubs/Organizations: Rutgers University Security Club, Data Science Club, IDEA Program

## EXPERIENCE

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### Software Engineer Intern

June 2023 – Present

*Fannie Mae*

*Reston, VA*

- Migrated data from Snowflake to **Aurora DB** using **AWS Lambda**, enhancing data availability and performance.
- Reduced query runtime to under 100ms for large-scale data pulls by implementing indexing, query optimization techniques, and efficient data structuring.
- Collaborated with design and product teams to implement front-end features based on Figma mockups using **React** and **TypeScript**.
- Created robust backend services with **Node.js** and **NestJS** to support data-intensive applications.

### Software Engineer Intern

June 2023 – Present

*Fannie Mae*

*Reston, VA*

- Used **DBeaver** to test **PostgreSQL** query performance through **AWS Redshift** saving **10 hours** per execution
- Worked with **Spring Boot** and **Angular** in Social Score Calculator webapp; improved error handling by **20%**
- **AWS** environment, implementing **SageMaker** for advanced data modeling; improved single-family prediction accuracy by **40%** for stakeholders, resulting in optimized resource allocation and increased revenue potential.
- Created decision trees to compare Dask, Pandas, Spark, and Polars based on cost and performance for utilization
- Created a **PowerAutomate** flow in Microsoft PowerApps to conduct the transfer of files from Sharepoint to S3.

### Teaching Assistant

May 2020 – Aug. 2020

*Genesis Code*

*Plainsboro, NJ*

- Taught lessons plans with **50+** students pivotal Java concepts such as polymorphism, inheritance, and encapsulation; also assigned a JavaFX game development project
- Reinforced concepts with limited computer access through exercises such as determine the output and big O analysis depending on experience; over **75%** of the cohort passed Data Structures certification exam

## PROJECTS

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### Portfolio-Website | *JavaScript, JSX, React, HTML, and CSS*

June - Present

- Developed a personal portfolio website using **React** components and props, components styled in **CSS**
- Optimized for mobile, tablet, and desktop devices for reachability: **10+** weekly visitors

### TuitionManager | *Java, JavaFX, XML, and SceneBuilder*

January - March 2023

- A college tuition manager for enrolling students saves **20+ hours** weekly compared to traditional SQL data entry
- Used core OOP concepts such as **inheritance, polymorphism, encapsulation, and data persistence**
- Created a GUI for easy interaction, tested backend code through blackbox-testing using **JUnit**

### Android Weather App | *Java, JSON*

August - October 2021

- Used an **AsyncTask** to enable the UI to alter in real-time based on the weather and time of day
- Utilized **Apache Maven** to automate build for deployment towards the end of production

## TECHNICAL SKILLS

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**General:** Object-Oriented Programming, Mobile Application Development, Agile Software Development Life Cycle

**Languages:** Java, Python, C/C++, MySQL, OCaml, R, Kotlin, JavaScript, XML, HTML, CSS, LaTeX

**Frameworks:** Spring Boot, Angular, React, Node.js, Ruby on Rails

**Developer Tools:** Git, VS Code, Android Studio, PyCharm, IntelliJ, Eclipse, JUnit, Maven, Gradle, Docker

**Libraries/API:** JavaFX, JDBC, pandas, NumPy, Matplotlib